

KHULNA UNIVERSITY

190205 || 200240

**Normalization on**

Dining Management System

Sumaiah Binta Musa || Istyaque Ahammed || Samundra Dhakal

190205 || 200240 || 200245

Student Table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Student-name | Student\_ID | Room\_Number | Discipline\_name | Mobile\_Number |
| Istyaque | 200240 | 404 | CSE | 01968291189 |
| Sumaiah | 190205 | 418 | CSE | 01559189718 |
| Atiqul | 202035 | 404 | Stat | 01792153630 |
| Rakib | 202040 | 404 | Stat | 01646484123 |
| . | . | . | . | . |
| . | . | . | . | . |

This table satisfies the 1st Normal Form, because it has no repeating groups of data. Each column contains atomic values, which means that it cannot be further divided into sub-columns.

This table satisfies the 2nd Normal Form, because it is in 1NF and all non-key attributes are fully dependent on the primary key.

This table satisfies the 3rd Normal Form, because it is in 2NF and there are no non-key attributes that are dependent on another non-key attributes.

Payments Table:

|  |  |  |  |
| --- | --- | --- | --- |
| Transaction\_ID | Student\_ID | Date\_of\_transaction | Amount |
| 103 | 200240 | 2023-03-18 | 65 |
| 107 | 190205 | 2023-04-07 | 65 |
| 116 | 200234 | 2023-04-15 | 35 |
| 119 | 202035 | 2023-04-18 | 65 |
| . | . | . | . |
| . | . | . | . |

This table satisfies the 1st Normal Form, because it has no repeating groups of data. Each column contains atomic values, which means that it cannot be further divided into sub-columns.

This table satisfies the 2nd Normal Form, because it is in 1NF and all non-key attributes are fully dependent on the primary key.

This table satisfies the 3rd Normal Form, because it is in 2NF and there are no non-key attributes that are dependent on another non-key attributes.

Manager Table:

|  |  |  |
| --- | --- | --- |
| Manager\_Name | Student ID | Mobile-Number |
| Istyaque | 200240 | 01968291189 |
| Sumaiah | 190205 | 01559189718 |
| Noor | 190223 | 01783336372 |
| Tanmoy | 182828 | 1445421854 |
| Rabeya | 191608 | 1545422114 |

This table satisfies the 1st Normal Form, because it has no repeating groups of data. Each column contains atomic values, which means that it cannot be further divided into sub-columns.

This table satisfies the 2nd Normal Form, because it is in 1NF and all non-key attributes are fully dependent on the primary key.

This table satisfies the 3rd Normal Form, because it is in 2NF and there are no non-key attributes that are dependent on another non-key attributes.

Meals Table:

|  |  |
| --- | --- |
| Meal-type | Price |
| Lunch | 35 |
| Dinner | 35 |
| Lunch and Dinner | 65 |

This table satisfies the 1st Normal Form, because it has no repeating groups of data. Each column contains atomic values, which means that it cannot be further divided into sub-columns.

This table satisfies the 2nd Normal Form, because it is in 1NF and all non-key attributes are fully dependent on the primary key.

This table satisfies the 3rd Normal Form, because it is in 2NF and there are no non-key attributes that are dependent on another non-key attributes.

Reports Table:

|  |  |  |
| --- | --- | --- |
| Report\_ID | Student\_ID | Comments |
| R 101 | 190205 | Lunch meal is not well cooked. |
| R 102 | 202035 | Lunch is too spicy. |
| R 103 | 200240 | Dining table is not neat and clean. |
| . | . | . |
| . | . | . |

This table satisfies the 1st Normal Form, because it has no repeating groups of data. Each column contains atomic values, which means that it cannot be further divided into sub-columns.

This table satisfies the 2nd Normal Form, because it is in 1NF and all non-key attributes are fully dependent on the primary key.

This table satisfies the 3rd Normal Form, because it is in 2NF and there are no non-key attributes that are dependent on another non-key attributes.